

REMARKS

Claims 1 through 25 are now presented for examination. Claims 1, 3, 5 and 22 through 25 have been amended to define still more clearly what Applicant regards as his invention, in terms which distinguish over the art of record. Claims 1, 3, 5 and 22-25 are the only independent claims.

Claims 5-13, 15 and 21-25 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 5,812,747 (Kayano et al.). Claims 10 and 14 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Kayano, et al. in view of U.S. Patent 5,933,584 (Maniwa). Claims 16, 17, 19 and 20 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Kayano, et al. in view of U.S. Patent 6,226,095 (Fukuta).

Independent Claims 5, 24 and 25 as currently amended are directed to an image forming arrangement that communicates data via a data communication medium with a remote image forming apparatus that stores a series of image data to be printed. According to the arrangement, a transmitter transmits to a remote image forming apparatus via the data communication medium a first data request requesting the remote image forming apparatus transmit stored image data according to a request from a user of the image forming apparatus. The data output by the remote image forming apparatus is acquired via the data communication medium in response to the data request. The data includes operation mode data preset for the series of image data stored and to be printed in the remote image forming apparatus.

In Applicant's view, Kayano, et al. discloses a copying system tha includes plural copying apparatuses, each capable of sharing image formation with other copying apparatus. The plurality of copying apparatus each has reading device for reading an original

document to obtain an image data thereof. A memory device stores the image data. An image forming device forms an image, based on the image data stored in the memory device. A control device determines allotment conditions for the image formation with other copying apparatus when an inter-connected mode in which the plurality of copying apparatus are connected and operated with each other is selected. A sending device sends the image data stored in the memory device to other copying apparatus. A receiving device receives image data sent from other copying apparatus. The image data received is stored in the memory means. When the inter-connected mode is selected, each of the other copying apparatus forms images on the basis of the image data received according to the determined allotment conditions. When one of the plurality of copying apparatus in the inter-connected mode during image forming operation becomes unable to form images, the control means determines new allotment conditions for the image formation with the other operable copying apparatus to form images which have not been formed among images allotted to the one of the copying apparatus.

According to the invention of Claims 5, 24 and 25, a data request to transmit is transmitted to a remote image forming apparatus storing a series of image data to be printed to have the remote image forming apparatus transmit image data stored therein according to a request from a user of an image forming apparatus that communicates data with the remote image forming apparatus. In response to the data request to the remote image forming apparatus from the user of the image forming apparatus, data output by the remote image forming apparatus is acquired by the image forming apparatus. The acquired data has operation mode data preset for the series of image data stored and to be printed in the remote image forming apparatus. Advantageously, a series of image data stored in a remote image forming apparatus can be

requested by a user of another image forming apparatus and the image data is acquired along with present mode data for the image data.

Kayano, et al. may disclose a printing process performed by plural image forming apparatuses. In Kayano, et al., a printing process on one job is performed by sharing image information with other image forming apparatuses. The plural image forming apparatuses are in a master slave relationship in which the master image forming apparatus determines which other image forming apparatuses are available for copying based on their statuses. There is, however, no teaching or suggestion in Kayano, et al. that any image forming apparatus can acquire image data and operation mode data stored in a remote image forming apparatus by a user data request. In Kayano, et al., only slave image forming apparatus status information is sent to the master image forming apparatus. The operation mode data in the present invention relates to data setting for an individual print job (e.g., number of copies, sorting, size reduction, etc.) and is completely distinguished from the status information of Kayano, et al. Kayano, et al. only discloses a slave image forming apparatus sending an error message to the master image forming apparatus so that the master image forming apparatus can reallocate the printing operation from the error message sending image forming apparatus to another image forming apparatus. There is no arrangement in which one of plural image forming apparatuses can make a data request of a remote image forming apparatus as in Claims 5, 24 and 25. Accordingly, Claims 5, 24 and 25 as currently amended are believed to be completely distinguished from Kayano, et al. and to be allowable.

Independent Claims 22 and 23 as currently amended are directed to an arrangement for controlling an image forming system having plural image forming apparatuses

with printing units. Each image forming apparatus has a network communication unit, a storage unit storing image data and operation mode data received through the network communication unit. In the arrangement, the image data and the operation mode data stored in another image forming apparatus is acquired into a first image forming apparatus through the network communication unit according to a request from a user of the first image forming apparatus. The operation mode of the first image forming apparatus is automatically updated to an operation mode according to the acquired operation mode data.

It is a feature of Claims 22 and 23 as currently amended that image data and operation mode data stored in another image forming apparatus is acquired into a first image forming apparatus through a communication network according to a request from a user of the first image forming apparatus. Accordingly, any of plural image forming apparatuses can send image data and operation mode data to any other image forming apparatus. In contrast, Kayano, et al. only teaches a master image forming apparatus that selects and allocates portions of a print job to plural slave image forming apparatuses in response to status information from the slave image forming apparatuses. Kayano, et al. only teaches transferring image data from a master image forming apparatus to a slave image forming apparatus in response to control from the master image forming apparatus but is devoid of any suggestion that image data and operation mode data from another image forming apparatus is acquired by a first image forming apparatus according to a request of a user of a first image forming machine.

It is another feature of Claims 22 and 23 that the operation mode of the first image forming apparatus is automatically updated to the operation mode according to the

acquired operation mode data. As discussed with respect to Claims 1, 24 and 25, Kayano, et al. only discloses sending of status information from a slave image forming apparatus to the master image forming apparatus which status information is not data for setting for an individual print job (e.g., number of copies, sorting, size reduction, etc.). Accordingly, it is not seen that Kayano, et al. in any manner teaches or suggests the feature of updating operation mode of an image forming apparatus according to acquired operation mode data as in Claims 22 and 23. it is therefore believed that Claims 22 and 23 are completely distinguished from Kayano, et al. and are allowable.

Claims 1, 3, 22 and 23 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Kayano in view of U.S. Patent 6,516,157 (Maruta, et al.). Claims 2 and 4 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Kayano, et al. in view of Maruta, et al. and further in view of Maniwa.

Independent Claims 1, 3, 22 and 23 are directed to an image forming system arrangement having plural image forming apparatuses with printing units. Each image forming apparatus has a network communication unit and a storage unit that stores image data and operation mode data received through the network communication unit. The image data and the operation mode data stored in another image forming apparatus are acquired by a first image forming apparatus through the network communication unit according to a request from a user of the first image forming apparatus. The operation mode of the first image forming apparatus is automatically updated to an operation mode in accordance with the acquired operation mode data.

In Applicant's opinion, Maruta, et al. discloses a printing system that has a printer, a center side data processor, and a remote user side processor (input terminal) all interconnected via a network. A print request and information related to a printing operation is sent from a user side processor to a reception device at the center side data processor. A printing cost is calculated and transmitted back to the user side processor via the network. Upon determination that payment has been received, the front data is sent to the printer for printing. The period of time of retaining the print data is modified depending upon whether payment has been received.

It is one feature of Claims 1, 3, 22 and 23 that image data and operation mode data that is stored in another image forming apparatus is acquired into a first image forming apparatus through a communication network according to a request from a user of the first image forming apparatus. Kayano, et al. as aforementioned only teaches that plural image forming apparatuses are in a master slave relationship in which one master image forming apparatus determines which other image forming apparatuses are available for copying based on their statuses and sends image data to the slave image forming apparatuses. There is, however, no teaching or suggestion in Kayano, et al. that any first image forming apparatus can acquire image data and operation mode data stored in another image forming apparatus by a data request of a user of the first image forming apparatus. In Kayano, et al., only status information is sent from a slave image forming apparatus to a master image forming apparatus and there is no user request from a slave image forming apparatus.

It is another feature of Claims 1, 3, 22 and 23 that the operation mode of the first image forming apparatus is automatically updated to the operation mode according to the acquired operation mode data. As discussed, Kayano, et al. only discloses sending of status information from a slave image forming apparatus to the master image forming apparatus which status information is not data for setting for an individual print job (e.g., number of copies, sorting, size reduction, etc.). Accordingly, it is not seen that Kayano, et al. in any manner teaches or suggests the feature of updating operation mode of an image forming apparatus according to acquired operation mode data as in Claims 1, 3, 22 and 23.

Maruta, et al. only teaches an arrangement stores both image data and printing condition data within the same memory. Kayano, et al. only teaches that a slave image forming apparatus acquiring image data from a single master image forming apparatus according to the operation of the master image forming apparatus but the slave image forming apparatus cannot request image data from the master image forming apparatus and the slave image forming apparatus can only send status information and an error message to the master image forming apparatus. Accordingly, Kayano, et al. is devoid of the feature of Claims 1, 3, 22 and 23 of image data and operation mode data stored in another image forming apparatus being acquired by a first image forming apparatus through a communication network according to a request from a user of the first image forming apparatus. Further, Kayano, et al. fails to suggest updating operation mode of the first image forming apparatus according to the acquired operation mode data from the another image forming apparatus.

With regard to the cited combination, it is not seen that the addition of Maruta, et al.'s storage of image data and printing condition data in one memory to Kayano, et al. which fails to suggest the features of image data and operation mode data stored in another image forming apparatus being acquired by a first image forming apparatus through a communication network according to a request from a user of the first image forming apparatus and updating operation mode of the first image forming apparatus according to the acquired operation mode data from the another image forming apparatus could possibly suggest the features of Claims 1, 3, 22 and 23. It is therefore believed that Claims 1, 3, 22 and 23 as currently amended are completely distinguished from any combination of Kayano, et al. and Maruta, et al. and are allowable.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's attorney, Daniel S. Glueck, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in cursive script, reading "Jack S. Cubert", written over a horizontal line.

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